

RESPONSE

Support

Applicants have amended claims 1 and 16 to specify that component (B)(1) is present from 1.6 to 3.5 weight percent. Support for these amendments is found on page 13, lines 10 to 22 of the specification. The specification states that (B)(1) may be present at weight percent values of 1.2 or more, 1.6 or more and 3.5 or more, as well as other such values throughout the specification. This disclosure implicitly includes the well defined area where (B)(1) is present at more than 1.6 and up to 3.5 weight percent. Applicants have amended claims 1 and 16 to include this range for component (B)(1).

Applicants have also amended claims 1 and 16 to specify that the total amount of components (B)(1) and (B)(2) present in the claimed compositions is from 5.5 to 15 weight percent. Support for these amendments is also found on page 13, lines 10 to 22 of the specification. The specification states that the combined amount of (B)(1) and (B)(2) may be present at weight percent values of 3.5 to 25, 5.5 to 20 and 6.5 to 15, as well as other such values throughout the specification. This disclosure includes the implicit range for the total of (B)(1) and (B)(2) of 5.5 to 15 weight percent. Applicants have amended claims 1 and 16 to include this range for component (B)(1).

No other elements of the claims have been changed.

Response

The Examiner has rejected claims 1, 3, 5-10 and 12-14 under 35 U.S.C. 103(a) as unpatentable over Blythe (US 5,264,005) in view of Teacherson (US 2004/0083729) and has rejected claims 16-20 under 103(a) as unpatentable over Blythe. The Examiner did not find the previous response and declaration persuasive.

The Examiner notes that Applicants contended the Examiner previously conceded the data in the specification demonstrates a surprising result. The Examiner has corrected Applicants that this is not the case. Applicants apologize for any confusion and note that Applicants contended only that the Examiner appeared to agree that the data in specification, though limited, did show an improvement in performance over the comparative samples. The Examiner has been clear that he considers the data in the specification, and the recently submitted declaration, to be insufficient to make

the previously presented claims patentable over the cited references. Applicants assume this indicates the Examiner agrees that the data in the specification and the previously presented declaration would support a finding of surprising results, and patentable claims, if additional data is presented showing the improved performance and/or sufficient amendments are made to the claims, so that the Examiner agrees the claims are commensurate in scope with the data showing the unexpected improved results. Applicants are responding to the current office action with this in mind, making further limiting amendments as well as more fully explaining the data previously presented. Applicants respectfully submit that in light of the amendments and the remarks below, the current claims are commensurate in scope with the data provided and ask that the claims be allowed.

In the current office action the Examiner contends the previous claims are not commensurate in scope with the data provided and cites two main points. First, the Examiner notes that claim 1 had previously allowed a total amount of (B)(1) and (B)(2) to range from 5.5 to 20 weight percent, while the data presented ranged from 5.6 to 10.8 weight percent. No data with treat rates between 11 and 20 weight percent have been presented and so Applicants have not shown the improvement is present over the entire claimed range. Second, the Examiner notes that the claims technically cover compositions with mere trace amounts of (B)(2). The data presented by Applicants includes examples with (B)(2) contents that range from 4 to 9.1 weight percent. No data with treat rates of (B)(2) below 4 weight percent have been provided. Applicants have amended the claims to address both of these points.

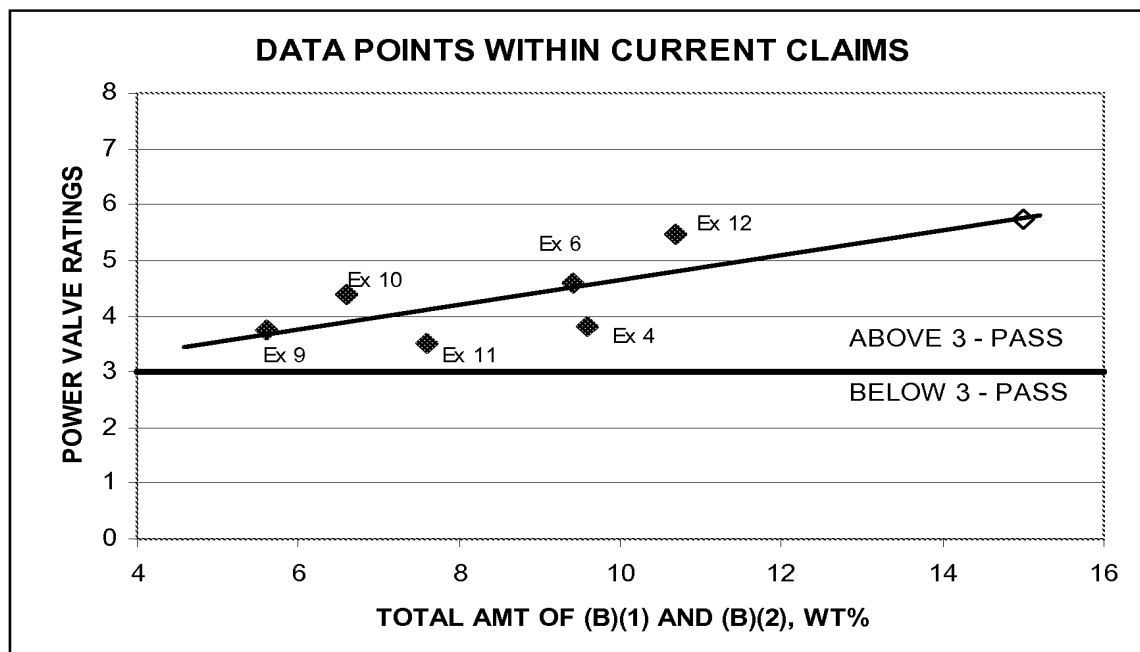
With regards to the range for the total amount of (B)(1) and (B)(2), the claims have been amended to specify that this total can be from 5.5 to 15 weight percent. Applicants submit that the data provided in the specification and the previous declaration clearly shows the improved results are present throughout this range. The data previously presented, as the examiner noted, included total amounts of (B)(1) and (B)(2), in weight percents, that ranged from 5.6, very close to the claimed minimum of 5.5, up to 10.7, reasonably close to the maximum claimed amount of 15.

Applicants contend this maximum claimed amount of 15 is sufficiently close to the 10.7 data point for the purposes of showing the improved performance. The 10.7 weight percent data point is less than 5 percentage points away from the end point. The

-- page 8

data is sufficient because of the clear trend seen in the inventive example results. The figure below is a plot of the data presented in the previous declaration, and it shows the clear trend line of increasingly better performance with higher treat rates of total (B)(1) and (B)(2), such that it is clear the performance of the present invention extends up to the claimed upper limit of 15 weight percent.

Figure 1



Applicants also note that each of the 11 data points collected and presented in the previous declaration, including each of the 6 inventive examples presented above, cost more than \$4,000 to complete. Additional testing will cost at least this much per point as well. Because of the costs involved, Applicants are reluctant to run additional testing unless absolutely necessary and have instead opted to further limit the claims and more fully explain the results already presented. Applicants believe that no additional testing should be needed and submit that the present claims are commensurate in scope with the data presented in the specification and previous declaration.

Applicants further note that previous test efforts were focused on the lower limits of the claimed ranges as these are the areas where one skilled in the art would look to see if performance drops off, as opposed to higher treat rates. Applicants

-- page 9

wished to clearly demonstrate the invention provided the improved performance at these low treat levels, as this is where any doubt about the limits of the invention would be focused. This is why the results presented include several examples with (B)(1) at the minimum level of 1.6 weight percent and combined amounts of (B)(1) and (B)(2) at 5.6 weight percent. In contrast, Applicants did not focus as much on the higher end of the claimed treat rate ranges as the trend of the results clearly shows what the outcome would be and one skilled in the art, given the results shown, would have no doubts about the performance at higher treat rates, even extending beyond the claimed range.

With regards to the amount of component (B)(2) allowed for by the claims, Applicants have amended the claims by placing an upper limit on the amount of component (B)(1) that may be present. (B)(1) must now be present from 1.6 to 3.5 weight percent. Since the combined amount of components (B)(1) and (B)(2) must now be 5.5 to 15 weight percent, this effectively ensures a minimum amount for (B)(2) of 3.9 weight percent, calculated by taking the minimum total amount of (B)(1) and (B)(2), 5.5 weight percent, minus the minimum amount of (B)(1), 1.6 weight percent, leaving 3.9 weight percent that must be (B)(2). The current claims also effectively impose a maximum limit for (B)(2) of 13.4 weight percent.

As the Examiner has noted, the data presented by Applicants includes examples with (B)(2) contents that range from 4 weight percent, just above the 3.9 minimum amount of (B)(2) that the claims cover, to 9.1 weight percent, reasonably close to the 13.4 weight percent maximum. This data point is considered sufficiently close to the maximum limit for the same reason discussed above.

The Examiner noted that Applicants have already limited the reaction products the fall under component (B)(1) and the data presented includes multiple (B)(1) components. Taken with the amendments above, Applicants have significantly narrowed the claims and have more fully explained the results presented. Applicants respectfully submit the current claims are commensurate in scope with the data presented in the specification and previous declaration, and that this data demonstrates a surprising result over the cited references such that the current rejections should be removed and the claims should be allowed.

-- page 10

Conclusion.

For the foregoing reasons it is submitted that the present claims are novel and unobvious over the cited reference, and in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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